

Modifying Learning Strategies for Classroom Success

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An Article Published in

TEACHING Exceptional Children Plus

Volume 1, Issue 3 , January 2005

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Modifying Learning Strategies for Classroom Success

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Abstract

Students with Learning Disabilities (LD) often experience significant difficulty with academic content at the secondary level due to weaknesses in reading comprehension, written expression, math skills, and vocabulary learning skills. This article will highlight the usefulness of learning strategies for ensuring success of students with LD in the general education classroom, suggest unique approaches to modifying learning strategies, and emphasize the essential nature of generalization of learning strategies to impact student performance in the general curriculum. Included are general guidelines for modifying learning strategies including experimenting to see what works with students, individualizing strategies to reinforce student investment, and highlighting strategy components that produce results

SUGGESTED CITATION:

O'Brien, C. (2005) Modifying learning strategies for classroom success. *TEACHING Exceptional Children Plus*, 1(3) Article 3. Retrieved [date] from <http://escholarship.bc.edu/education/tecplus/vol1/iss3/3>

Mr. Hendricks, a special education co-teacher specializing in learning strategies instruction in an urban middle school, was experiencing difficulty helping his students succeed in their general education classes. Mrs. Johnson, the English content teacher in the 7th grade co-taught class determined that their students needed to show knowledge of the key middle school vocabulary for understanding literature (e.g., character, resolution, conflict) as mandated by the state standards. The students found this to be no easy task. Mr. Hendricks knew it was his responsibility to teach the students some kind of effective method for learning new vocabulary and it better be usable for students individually and consistently.

This scenario emphasizes the need for teachers of students with LD to be prepared to impart specific skills or strategies for success to their students. This article will highlight the effectiveness of learning strategies for ensuring the success of students with LD in the general education classroom, offer unique suggestions for the appropriate modification of learning strategies, and emphasize the essential nature of generalization of learning strategies to truly impact student performance with the general curriculum.

Today's educators teaching students with Learning Disabilities (LD) at the secondary level face the tremendous challenge of helping students develop independent skills to fully master the general education curriculum. These teachers have probably taught students who struggle with reading comprehension, written expression, and memorization of vocabulary and wondered how they can help these students to experience academic success in the general education classroom.

Learning Strategies

Learning strategies are typically thought of in relation to interventions for students with LD that focus on teaching skills to students so they can work independently and experience success with the general curriculum. Specifically, these skills have included approaches for improving reading comprehension, written

expression, mathematical problem solving, test-taking skills, and memorization of new information such as content vocabulary (Deshler, et al., 2001). Consistent in the many learning strategies available to educators are certain core features. Strategies typically address a process that students find difficult and offer them some method for remembering the steps for implementation (Berry, Hall, & Gildroy, 2004). Often, students with LD come to school unprepared to perform the tasks assigned to them. Although all students use some kind of innate learning strategies, these strategies are often ineffective for success in school (Ellis, 1997). Students with LD must be explicitly taught more successful strategies for performing tasks in school. Essentially, teaching students with LD to use learning strategies is like ensuring they have all the necessary tools to do their job in the classroom.

The Learning Strategies Curriculum developed by the University of Kansas assigns the strategies to three groups: strategies for acquisition, storage, and expression or demonstration of comprehension. Strategies in this curriculum include strategies for reading comprehension (e.g., The Word Identification Strategy, The Paraphrasing Strategy), memorization of information (e.g., The FIRST-Letter Mnemonic Strategy, The LINC'S Vocabulary Strategy), expression of information (e.g., The

Sentence Writing Strategy, The Paragraph Writing Strategy), and demonstration of competence (e.g., The Test-Taking Strategy) which have been shown to be effective in improving student learning and performance (Lenz, Deshler, & Kissam, 2004).

Research-Based Practices

Special education is often said to suffer from a gap between research and practice (Deshler, 2003). The No Child Left Behind Act (2001) has recently increased the focus on accountability, academic achievement, and content standards while emphasizing the use of research-based practices. The impact of this legislation has been felt across educational settings and influences professional educators to reexamine instructional practices focusing on those, which have been research-validated. Strategies in the Learning Strategies Curriculum have been field-tested in schools to show their effectiveness and long-term research has shown them to be effective when “consistent, intensive, explicit instruction and support are key ingredients” (Lenz, Deshler, & Kissam, 2004, p. 358). Additionally, attempts to determine what works in special education have shown the use of mnemonic learning strategies to have strong support in the research literature (Lloyd, Forness, & Kavale, 1998). The use of research-based Learning Strategies might be one of the best approaches for bridging the gap between research and practice as it relates to the instruction of secondary content for students with LD.

Need for User-friendly Learning Tools

There are numerous examples of effective learning strategies that are likely to ensure students’ ability to learn content material by enhancing their reading comprehension, written expression, and ability to learn new vocabulary. However,

when considering the barrage of content standards that general educators are compelled to “cover”, learning strategies need to be user-friendly for students to use with proficiency and generalize to the general education classroom. In using learning strategies, teachers may find an occasional need to modify the strategies in order to individualize them to student preferences and quickly give them a new “tool” for classroom learning. This is particularly true for diverse student populations in urban settings where students often come to school lacking the necessary tools for success with secondary content. Keeping in mind that students are in need of strong academic learning skills to succeed, minor modifications to strategies that maintain the original spirit of the method are appropriate. The educator modifying strategies must, however, accept that the research underlying the development of these strategies will be compromised in this process.

Research-based strategies are only useful, though, if teachers pass them on to their students and those students find them easy to learn and implement. As Deshler (2003) noted, educators cannot really consider an instructional method to be a strong research-based practice if it “ends up sitting on the shelf in most classrooms because it is too cumbersome or burdensome to use” (p. 1). Ultimately, generalization of these skills to the classroom is the real point of teaching these strategies.

Vocabulary Memorization Strategy

One specific example of an effective research-based learning strategy is the LINCIS vocabulary strategy (Ellis, 2000). This strategy for students with LD promotes memorization of content vocabulary that might be particularly challenging at the secondary level. The strategy requires students to create note cards and follow a

series of steps. They will remember the steps with help from the mnemonic name of the strategy. The letters L, I, N, C, S each cue students to remember the steps of the strategy and should be taught explicitly and rehearsed before beginning the strategy.

To begin creating the LINC S note cards students draw a horizontal line on both the front and back of their note card (dividing the card into top and bottom equal halves) and a vertical line on the lower back half dividing the lower portion into lower left and lower right quadrants (See Figure 1). The L in LINC S stands for “List the parts.” This first step of the strategy refers to the parts of the word being learned which basically are the word itself and its definition. Students write these parts above the lines on the front and back of the card above the horizontal lines. The I stands for “Identify a reminding word.” Students are expected to think of a word, which sounds like or is similar in some way to the word they are learning. The word could be, but does not have to be a rhyming word. The students write this word under the horizontal line on the front of the card. Next, the students draw a vertical line on the back bottom half of the card to make space for two of the upcoming steps. The N in LINC S stands for “Note a LINCing story.” This letter indicates that students are supposed to be creative and think of a brief story that they could make up about their reminding word. This story is not supposed to use the actual word being learned but only the reminding word and the story should be written on the back of the card in the lower left quadrant. The C stands for “Create a LINCing picture.” At this point the students have a great opportunity to express their creative side and draw a picture of the story they developed. The picture does not have to be elaborate but many students find pleasure in this step of the strategy. The

picture should be drawn in the lower right quadrant next to the story.

Finally, the last step is S or “Self-test.” This step brings the whole strategy together. At this point we see why the studied word is only on the front of the card. The back of the card provides cues meant to lead the student to link the information in the picture and the story back to the reminding word which will then cue them to remember the vocabulary word being studied. The strategy is based on this notion of creating meaningful connections in memory similar to the links in a chain. For a comprehensive explanation of this strategy, consult *The LINC S Vocabulary Strategy* (Ellis, 2000).

The LINC S Strategy as an Example for Modification

At times, educators and students experience challenges with using strategies. In the case of the LINC S vocabulary strategy, the second step, which requires students to “Identify a reminding word” might be problematic for some students. Periodically, students demonstrate difficulty in developing comfort and success with this aspect of the strategy. Students may become frustrated when they cannot independently think of a “reminding word.” They often struggle trying only to think of a word that rhymes with the target word and if that doesn’t work, they feel defeated. Considering the need for students to quickly develop new skills, it could be unwise to spend extensive time helping them develop proficiency with a strategy they do not find enjoyable or useful.

Instead, modifying or individualizing the strategy to meet the needs of students with LD may be more beneficial. Modification or individualization of the strategy also offers students a sense of ownership, which may increase their personal investment in the learning

technique. Although this strategy has been shown to be effective in previous research (Ellis, 2000), a strategy is only useful if it is fully accepted by students and included in their learning repertoire.

Adaptations to the Strategy

The following scenario illustrates modification of the LINC S vocabulary strategy:

Mr. Hendricks, finding his students struggling with the English Vocabulary items, intervened by teaching his students the LINC S vocabulary strategy. He was teaching a class of 15 students with LD in a diverse, urban setting. He had used this strategy with students in the past with great success. While teaching the strategy, Mr. Hendricks observed his students struggling with the “reminding word” step. He had seen this struggle before with a group of 6th graders in a previous school year. He asked his class what they thought would be better than the step with which they were struggling. Initially students had no suggestions, so Mr. Hendricks spent time discussing the strategy with his class of very motivated students and attempted to discover what about the LINC S strategy helped them learn. After a productive discussion, the class determined that they learned the new vocabulary mainly by spending time with it in some kind of creative manner. Essentially, they loved the parts of the strategy that required them to make up a story and draw a picture of that story. Initially, it was agreed that they would simply eliminate the “reminding word” step, but later when students were developing their LINC S cards with their “buddies” and teacher assistance it was decided that they could show some preliminary understanding of the word if they attempted to use the word in a sentence, a task their English teacher often requested of them. Therefore the second step was changed from “Identify a reminding word” to “Invent a sentence”. This sentence was usually very simple and created by looking at how the word was used in context in their textbook or other supplemental texts. As a pair, students were very successfully at thinking of a sentence using the word. Remembering the premise of the “self-test” concept, essential to this strategy, the short sentence was simply used to replace the “reminding word” on the front of their LINC S card. Using the word in a sentence on the front of the card did not corrupt the “self-test” process.

Following that step, students could focus on the steps that they found most useful. Students still created a story on the back of their card. The story would typically be an elaboration of the sentence on the front of the card. Students were reminded that for the “self-test” procedure to be effective, it was critical that their story not include the actual word being learned. Creating the LINCing picture remained an enjoyable aspect of the strategy. One could speculate that students with LD enjoyed this more creative, unstructured part of the strategy particularly because it enabled them to put into practice those skills such as artistic expression, which they might not often have the opportunity to use in the general education classroom.

An example (see Figure 1) of a modified LINC S card for the word “conflict” previously mentioned in the list of literature vocabulary terms (using the new “Invent a sentence” step) would be something similar to the following:

- L (List the parts) the students would write the word “conflict” on the front of the card above the horizontal

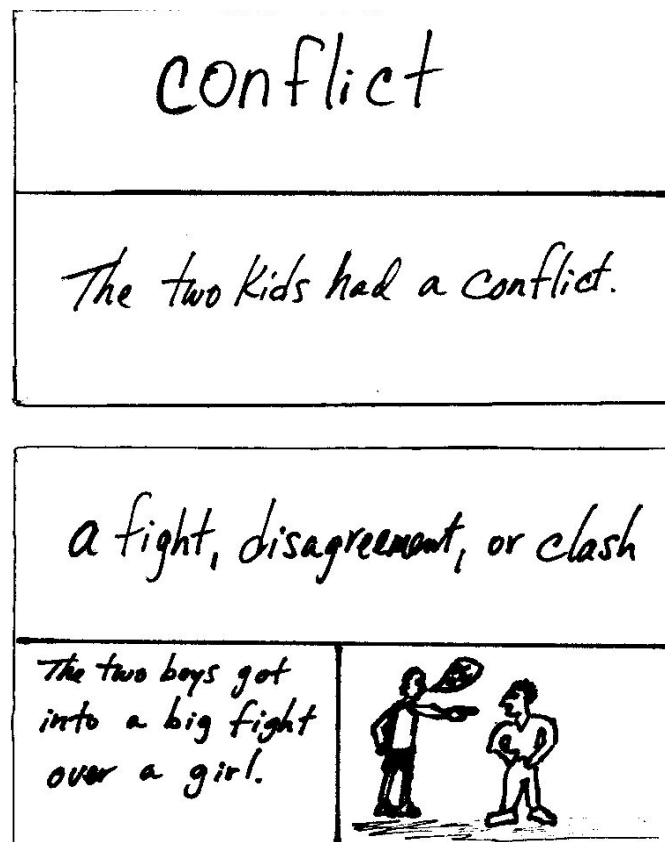
drawn line and write an abbreviated definition, “a fight, disagreement, or clash” on the back of the card again above the horizontal line,

- I (Invent a sentence) the students either individually or with the help of his or her study partner would make up a sentence like “The two kids had a conflict.” on the front of the card below the line,

- N (Note a LINCing story) the students would make up a very brief story elaborating on the sentence from the front of the card but not using the vocabulary word and write it in the lower left quadrant on the back of the card. A story might be “The two boys got into a big fight over a girl”,
- C (Create a LINCing picture) the students would draw a simple picture that matches the story created in the left lower quadrant of the note card. It should be a simple drawing,
- S (Self-test) the students would test themselves “forward” and

“backward” looking at the cards to test if they have made a permanent connection between the definition and the word being learned. For example, the student would look at the picture they had drawn which would remind them of the story they had made up. The story would remind them of the sentence they had made up which includes the target word. Then when looking at the definition “a fight, disagreement, or clash”, they would remember that the word was “conflict.”

Figure 1. Example of a LINCing note card using the modified approach to the vocabulary learning strategy.



This example is very similar to the original LINCS strategy approach with the exception of the small modification made to help students develop proficiency.

Informal Data Collection

This adapted version of the strategy was taught immediately after students in Mr. Hendricks's class were given a list of literature vocabulary words to study for a test in their English class. The students having no real method for studying or memorizing vocabulary did very poorly on the test. The average score was approximately 60% with most students receiving scores in the mid 50s. After discussing with the general education co-teacher, the decision was made that the students would attempt to learn the words again after learning a strategic way to study and memorize vocabulary.

After intensive instruction in the LINCS strategy including the modification and additional facilitated development of their own LINCS cards with a peer, students were assigned to practice with their partner to see if they could name the vocabulary word from their definition, story, and picture. Once all of the students felt comfortable with their LINCS cards, they were given one night to study and told that the next day they would re-take their English test on literature vocabulary. On the second attempt the lowest score was 70% and twelve of the fifteen students scored in the 90s. The average went from approximately 60% to approximately 88%.

Focus on Generalization of New Skills

One major reason for altering the strategy relates to the need for students to generalize their use of learning strategies to the general education classroom. Generalization is consistently one of the weaknesses of strategy instruction (Ellis, 1993). If teachers do not impart skills to students such that they are usable for students individually and consistently, they cannot expect that students will take advantage of the boost those skills offer in their content classes. The need for generalization is an important reason to take into account the students' perception of a strategy's usability and make modifications as necessary. No matter what strategy is being implemented, generalization of a strategic approach for learning to the content classroom should be the focus of the learning strategies teacher.

Brief Description of Modifying the SLANT Strategy

Another example of a widely implemented and successful strategy is SLANT, a metacognitive strategy for participation during class (Ellis, 1989). The most up-to-date version of this strategy is promoted as SLANT: A Starter Strategy for Class Participation and is included in the University of Kansas Learning Strategies Curriculum (Lenz, Deshler, & Kissam, 2004). The first letters of the name of the strategy guides the steps for this, like the LINCS strategy. The steps are S for "Sit up", L for "Lean forward", A for "Activate your thinking", N for "Name key information", and T for

“Track the talker.” This strategy is a particularly good example for modification as teachers working with students with LD have changed these steps quite often over the years of its implementation. The steps “Activate your thinking” and “Name key information” are often adapted for student vocabulary level and personal preference. Teachers using this strategy with younger students have changed the A to “Ask questions” or “Ask yourself questions” when emphasizing the metacognition aspect of the strategy. If students struggle with the abstractness of the “Name key information” step, teachers can instead teach the N as “Nod” to help students demonstrate active listening in class. Any way the strategy is modified, the focus continues to be on active participation in class and making positive impressions on classroom teachers to promote academic success. Many more examples of modifications could be proposed, but ultimately, appropriate adaptations should represent an attempt to individualize to the preferences and unique needs of the students using the strategies.

Modifying Strategies in your Classroom

The following are five general guidelines for modifying strategies for classroom success:

- Individualize according to student preference to reinforce student investment
- Highlight the components that produce results
- Maintain the original spirit of the strategy

- Focus on imparting strategies that will be generalized to the classroom
- Monitor student performance to validate modifications

Efforts to follow these guidelines promote an emphasis on generalization of strategies by making them user-friendly for students while attempting to maintain the effectiveness of the original research-validated strategies.

Final Thoughts

When considering modifying learning strategies for the needs of students with LD, remember that the original methods are effective. Research-validated learning strategies should not be altered simply to make them easier to teach. In fact, the effectiveness of these learning strategies often depends on the instruction being consistent, intensive, and explicit (Lenz, Deshler, & Kissam, 2004). When a student demonstrates an urgent need for strategic learning, the special educator should be ready with effective strategies to help make that student more successful. Learning strategies are an essential part of the special education teacher’s intervention and simple modifications can make those strategies more efficient to teach, user-friendlier for students, and easier to promote to colleagues in general education. In the end, learning strategies can only be effective if teachers pass them on to students and those students implement them as part of their daily repertoire in the general education classroom.

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